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| (21) International Application Number: PCT/US00/00641 | | | (US). HILLMAN, Jennifer, L. [US/US]; 230 Monroe Drive #12, Mountain View, CA 94040 (US). TANG, Y., Tom [US/US]; 4230 Ranwick Court, San Jose, CA 95118 (US). AZIMZAI, Yalda [US/US]; 2045 Rock Springs Drive, Hayward, CA 94545 (US). BAUGHN, Mariah, R. [US/US]; 14244 Santiago Road, San Leandro, CA 94577 (US). LAL, Preeti [US/US]; 2382 Lass Drive, Santa Clara, CA 95054 (US). YUE, Henry [US/US]; 826 Lois Avenue, Sunnyvale, CA 94087 (US). LU, Dyung, Aina, M. [US/US]; 55 Park Belmont Park, San Jose, CA 95136 (US). |
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| 60/132,253 3 May 1999 (03.05.99) US | | | |
| 60/136,653 27 May 1999 (27.05.99) US | | | (74) Agents: HAMLET-COX, Diana et al.; Incyte Pharmaceuticals, Inc., 3174 Porter Drive, Palo Alto, CA 94304 (US). |
| (63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Applications | | | |
| US 60/172,247 (CIP) | | | |
| Filed on 11 January 1999 (11.01.99) | | | |
| US 60/132,253 (CIP) | | | |
| Filed on 3 May 1999 (03.05.99) | | | (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). |
| US 60/136,653 (CIP) | | | |
| Filed on 27 May 1999 (27.05.99) | | | |
| (71) Applicant (for all designated States except US): INCYTE PHARMACEUTICALS, INC. [US/US]; 3174 Porter Drive, Palo Alto, CA 94304 (US). | | | |
| (72) Inventors; and | | | |
| (75) Inventors/Applicants (for US only): BANDMAN, Olga [US/US]; 366 Anna Avenue, Mountain View, CA 94043 | | | Published Without international search report and to be republished upon receipt of that report. |
| (54) Title: HUMAN PEPTIDASES | | | |
| (57) Abstract | | | |
| <p>The invention provides human peptidases (HPEP) and polynucleotides which identify and encode HPEP. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorders associated with expression of HPEP.</p> | | | |

Table 2 (cont.)

| SEQ ID NO: | Amino Acid Residues | Potential Phosphorylation Sites | Potential Glycosylation Sites | Signature Sequences, Motifs, and Domains | Homologous Sequences | Analytical Methods |
|------------|---------------------|---|-------------------------------|---|---|---------------------------|
| 14 | 703 | S20 S68 T120 T135 S331 T383 S562 S606 S607 S631 S674 S698 T31 S95 S115 S173 S355 S490 S562 S650 | N318 N434 N445 N670 | E1 ubiquitin activating enzyme: K352-H442 | E1-like protein (ubiquitin activating enzyme) [Pichia pastoris] g4262402 | MOTIFS BLAST BLIMPS |
| 15 | 145 | T36 S100 S115 T47 | N34 | Protease serine hydrolase precursor signal zymogen glycoprotein multigene family: L16-Q64, G87-K140 Trypsin: L25-Q64, S84-N142 | Matrptase (serine protease) [Homo sapiens] g5359675, g6002714 Epithin (membrane bound serine protease) [Mus musculus] g4104970 | MOTIFS BLAST BLIMPS |
| 16 | 518 | S74 T252 S151 T169 T245 S312 S361 T419 S462 S502 S16 S70 S98 S133 T301 S331 S428 T516 Y334 | N234 | Dipeptidyl peptidase IV: H255-L305, E326-Q352, E379-P411 | Dipeptidyl peptidase IV [Stenotrophomonas maltophilial] g1753197 | MOTIFS BLAST BLIMPS |

| | |
|---|---------|
| Pro Thr Ser Leu Gly Leu Val Pro His Gln Ile Arg Gly Phe Leu | |
| 620 | 625 630 |
| Ser Arg Phe Asp Asn Val Leu Pro Val Ser Leu Ala Phe Asp Lys | |
| 635 | 640 645 |
| Cys Thr Ala Cys Ser Ser Lys Val Leu Asp Gln Tyr Glu Arg Glu | |
| 650 | 655 660 |
| Gly Phe Asn Phe Leu Ala Lys Val Phe Asn Ser Ser His Ser Phe | |
| 665 | 670 675 |
| Leu Glu Asp Leu Thr Gly Leu Thr Leu Leu His Gln Glu Thr Gln | |
| 680 | 685 690 |
| Ala Ala Glu Ile Trp Asp Met Ser Asp Asp Glu Thr Ile | |
| 695 | 700 |

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<211> 145

<212> PRT

<213> Homo sapiens

<220>

<221> misc_feature

<223> Incyte ID No: 2634725CD1

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| 20 25 30 | |
| Arg Val Ile Asn Gln Thr Thr Cys Glu Asn Leu Leu Pro Gln Gln | |
| 35 40 45 | |
| Ile Thr Pro Arg Met Met Cys Val Gly Phe Leu Ser Gly Gly Val | |
| 50 55 60 | |
| Asp Ser Cys Gln Val Ala Pro Gly Ala Gly Gly Arg Gln Val Gly | |
| 65 70 75 | |
| Pro Gly Arg Gly Gly Thr Gly Asp Ser Pro Ala Gly Leu Val Ser | |
| 80 85 90 | |
| Ala Gln Gly Asp Ser Gly Gly Pro Leu Ser Ser Val Glu Ala Asp | |
| 95 100 105 | |
| Gly Arg Ile Phe Gln Ala Gly Val Val Ser Trp Gly Asp Gly Cys | |
| 110 115 120 | |
| Ala Gln Arg Asn Lys Pro Gly Val Tyr Thr Arg Leu Pro Leu Phe | |
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| 140 145 | |

<210> 16

<211> 518

<212> PRT

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<223> Incyte ID No: 2643110CD1

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| | | | | | | | | | | | | | | | | | | |
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| Met | Arg | Lys | Val | Lys | Lys | Leu | Arg | Leu | Asp | Lys | Glu | Asn | Thr | Gly | 1 | 5 | 10 | 15 |
| Ser | Trp | Arg | Ser | Phe | Ser | Leu | Asn | Ser | Glu | Gly | Ala | Glu | Arg | Met | 20 | 25 | 30 | |
| *Ala | Thr | Thr | Gly | Thr | Pro | Thr | Ala | Asp | Arg | Cys | Asp | Ala | Ala | Ala | 35 | 40 | 45 | |
| Thr | Asp | Asp | Pro | Ala | Ala | Arg | Phe | Gln | Val | Gln | Lys | His | Ser | Trp | 50 | 55 | 60 | |
| Asp | Gly | Leu | Arg | Ser | Ile | Ile | His | Gly | Ser | Arg | Lys | Tyr | Ser | Gly | 65 | 70 | 75 | |
| Leu | Ile | Val | Asn | Lys | Ala | Pro | His | Asp | Phe | Gln | Phe | Val | Gln | Lys | 80 | 85 | 90 | |
| Thr | Asp | Glu | Ser | Gly | Pro | His | Ser | His | Arg | Leu | Tyr | Tyr | Leu | Gly | 95 | 100 | 105 | |
| Met | Pro | Tyr | Gly | Ser | Arg | Glu | Asn | Ser | Leu | Leu | Tyr | Ser | Glu | Ile | 110 | 115 | 120 | |
| Pro | Lys | Lys | Val | Arg | Lys | Glu | Ala | Leu | Leu | Leu | Leu | Ser | Trp | Lys | 125 | 130 | 135 | |
| Gln | Met | Leu | Asp | His | Phe | Gln | Ala | Thr | Pro | His | His | Gly | Val | Tyr | 140 | 145 | 150 | |
| Ser | Arg | Glu | Glu | Glu | Leu | Leu | Arg | Glu | Arg | Lys | Arg | Leu | Gly | Val | 155 | 160 | 165 | |
| Phe | Gly | Ile | Thr | Ser | Tyr | Asp | Phe | His | Ser | Glu | Ser | Gly | Leu | Phe | 170 | 175 | 180 | |
| Leu | Phe | Gln | Ala | Ser | Asn | Ser | Leu | Phe | His | Cys | Arg | Asp | Gly | Gly | 185 | 190 | 195 | |
| Lys | Asn | Gly | Phe | Met | Val | Ser | Pro | Met | Lys | Pro | Leu | Glu | Ile | Lys | 200 | 205 | 210 | |
| Thr | Gln | Cys | Ser | Gly | Pro | Arg | Met | Asp | Pro | Lys | Ile | Cys | Pro | Ala | 215 | 220 | 225 | |
| Asp | Pro | Asp | Phe | Phe | Ser | Phe | Ile | Asn | Asn | Ser | Asp | Leu | Trp | Val | 230 | 235 | 240 | |
| Ala | Asn | Ile | Glu | Thr | Gly | Glu | Glu | Arg | Arg | Leu | Thr | Phe | Cys | His | 245 | 250 | 255 | |
| Gln | Gly | Leu | Ser | Asn | Val | Leu | Asp | Asp | Pro | Lys | Ser | Ala | Gly | Val | 260 | 265 | 270 | |
| Ala | Thr | Phe | Val | Ile | Gln | Glu | Glu | Phe | Asp | Arg | Phe | Thr | Gly | Tyr | 275 | 280 | 285 | |
| Trp | Trp | Cys | Pro | Thr | Ala | Ser | Trp | Glu | Gly | Ser | Glu | Gly | Leu | Lys | 290 | 295 | 300 | |
| Thr | Leu | Arg | Ile | Leu | Tyr | Glu | Glu | Val | Asp | Glu | Ser | Glu | Val | Glu | 305 | 310 | 315 | |
| Val | Ile | His | Val | Pro | Ser | Pro | Ala | Leu | Glu | Glu | Arg | Lys | Thr | Asp | 320 | 325 | 330 | |
| Ser | Tyr | Arg | Tyr | Pro | Arg | Thr | Gly | Ser | Lys | Asn | Pro | Lys | Ile | Ala | 335 | 340 | 345 | |
| Leu | Lys | Leu | Ala | Glu | Phe | Gln | Thr | Asp | Ser | Gln | Gly | Lys | Ile | Val | 350 | 355 | 360 | |
| Ser | Thr | Gln | Glu | Lys | Glu | Leu | Val | Gln | Pro | Phe | Ser | Ser | Leu | Phe | 365 | 370 | 375 | |
| Pro | Lys | Val | Glu | Tyr | Ile | Ala | Arg | Ala | Gly | Trp | Thr | Arg | Asp | Gly | 380 | 385 | 390 | |
| Lys | Tyr | Ala | Trp | Ala | Met | Phe | Leu | Asp | Arg | Pro | Gln | Gln | Trp | Leu | 395 | 400 | 405 | |

Gln Leu Val Leu Leu Pro Pro Ala Leu Phe Ile Pro Ser Thr Glu
 410 415 420
 Asn Glu Glu Gln Arg Leu Ala Ser Ala Arg Ala Val Pro Arg Asn
 425 430 435
 Val Gln Pro Tyr Val Val Tyr Glu Glu Val Thr Asn Val Trp Ile
 440 445 450
 Asn Val His Asp Ile Phe Tyr Pro Phe Pro Gln Ser Glu Gly Glu
 455 460 465
 Asp Glu Leu Cys Phe Leu Arg Ala Asn Glu Cys Lys Thr Gly Phe
 470 475 480
 Cys His Leu Tyr Lys Val Thr Ala Val Leu Lys Ser Gln Gly Tyr
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 Asp Trp Ser Glu Pro Phe Ser Pro Gly Glu Gly Glu Gln Ser Leu
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<210> 17

<211> 476

<212> PRT

<213> Homo sapiens

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<223> Incyte ID No: 2701396CD1

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 Arg Phe Lys Arg Ala Ile Phe Gln Gly Gln Tyr Cys Arg Asn Phe
 50 55 60
 Gly Cys Cys Glu Asp Arg Asp Asp Gly Cys Val Thr Glu Phe Tyr
 65 70 75
 Ala Ala Asn Ala Leu Cys Tyr Cys Asp Lys Phe Cys Asp Arg Glu
 80 85 90
 Asn Ser Asp Cys Cys Pro Asp Tyr Lys Ser Phe Cys Arg Glu Glu
 95 100 105
 Lys Glu Trp Pro Pro His Thr Gln Pro Trp Tyr Pro Glu Gly Cys
 110 115 120
 Phe Lys Asp Gly Gln His Tyr Glu Glu Gly Ser Val Ile Lys Glu
 125 130 135
 Asn Cys Asn Ser Cys Thr Cys Ser Gly Gln Gln Trp Lys Cys Ser
 140 145 150
 Gln His Val Cys Leu Val Arg Ser Glu Leu Ile Glu Gln Val Asn
 155 160 165
 Lys Gly Asp Tyr Gly Trp Thr Ala Gln Asn Tyr Ser Gln Phe Trp
 170 175 180
 Gly Met Thr Leu Glu Asp Gly Phe Lys Phe Arg Leu Gly Thr Leu
 185 190 195
 Pro Pro Ser Pro Met Leu Leu Ser Met Asn Glu Met Thr Ala Ser